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EDUCATIONAL PROGRESS FOR 1907¹

CHARLES R. ALLEN

Chairman of Committee on Educational Progress

EDUCATION AND PROGRESS

Those of us who believe that there exists a profession of education, just as there exist professions of law and medicine, must also believe that such a profession is based on a science of education, on a body of ascertained fact, which is the basis of actual practice. This mass of knowledge cannot be, in education any more than in any other profession, a fixed quantity; but must be continually in a state of flux, taking into itself new material, discarding that which has been found valueless, or modifying concepts in the light of newly discovered truth.

Were this not the case there would be little hope for the future of our profession; for, under the rapidly changing conditions of modern life, a profession which cannot keep itself "in touch," so to speak, which does not possess within itself the power of adaptability, will soon cease to fulfil its function and pass, as Carlyle put it, "into the dustbin of history." Progress in educational science must come, as progress in any science must come, from experience. Between the organized body of accepted practice and the wholly unknown methods of the future lies the borderland of experiment: the skirmish line, as it were, of progress. Here or there, perhaps owing to particu-

¹ A report by the Committee on Educational Progress of the Harvard Teachers' Association, read at the annual meeting of the association in Cambridge, March 7, 1908. Committee: Charles R. Allen, New Bedford High School, New Bedford, Mass., chairman; Henry W. Holmes, Harvard University, Cambridge, Mass., secretary; Laura Fisher, kindergarten, Boston, Mass.; Florence E. Leadbetter, Roxbury High School, Boston, Mass.; Alice E. Dickinson, Bridgewater State Normal School, Bridgewater, Mass.; Willard Reed, Brown and Nichols School, Cambridge, Mass.; William T. Foster, Bowdoin College, Brunswick, Maine; Charles R. Breck, superintendent, Methuen, Mass.; John W. Wood, Rindge Manual Training School, Cambridge, Mass.; Clair Persons, superintendent, Westerly, R. I.

larly favorable conditions, some problem of administration is being worked out in a new and better way; here or there some teacher, perhaps because of fortunate circumstances, perhaps because he is "a teacher by the grace of God," is working out to better results some problem of method or of programme. So all along the line, from the great city-school system to the isolated classroom, your committee has felt that the field of its investigation lay, not with the main army, but with the skirmishers—not in statistics, but in such evidences as it could find of accomplished work which would indicate new ways wherein our profession, essentially one of service, may be enabled to render that service more effectually, more directly, more completely.

We were confronted at the outset, of course, with the necessity of defining the field of our labor. We found ourselves forced to ask at once, How much of the activity of society is educational, and what changes therein shall we consider progressive? But we did not stop to discuss abstract questions, nor do we wish before this audience to offer any definition of education. We purposely set the limits of our field broadly and somewhat vaguely: Education we held to be the conscious attempt of society to enable its members, young or old, to live as complete, full, and significant lives as possible. And any change in activity or in point of view which favors this attempt, we held to be educational progress.

Keeping these general concepts in mind, your committee has taken as wide a survey of the field of education as has been possible, and brings to you today such evidences of progress as it has been able to glean—mere straws perhaps, but straws which show, in our opinion, which way the wind is blowing.

It is our understanding that this committee is to be a permanent body—that we are inaugurating, not completing, a task of some importance; and with this idea in mind, we have recorded hopeful beginnings, and promising tendencies, in the expectation that others would record the success or the failure, the growth or the degeneration to which each movement may later be subject.

THE THREE MAIN TENDENCIES

In looking over our evidences of progress, three general movements seem to be indicated: the first, a marked tendency to broaden the conception of education, to enlarge the scope of our ideas as to the function of education; the second, an increased appreciation of the teacher and his work in the community; the third, an increasing tendency to substitute action for words in the educative process, to make greater use of the laboratory principle in education, at the expense of book work, the method of the lecture, and even of the recitation.

The first of these movements, namely the tendency to take a broader view of education, is indicated by the development of vocational education, which has manifested itself both in the way of legislation and in the professional working out of problems of vocational character. This broader view is indicated also by the tendency to treat the school as a social center. Increased emphasis upon the care and training of the body is another indication of this tendency.

The second movement, namely, the increased appreciation of the teachers' work, is indicated in three ways. First, by the increasing demands made upon teachers in the way of professional equipment and ability to keep in touch with educational movements; second, in the way of legislation, enacted or proposed, with the object of attracting into the profession persons of better caliber; and third, a recognition of the value of the teacher as an advisor to school officers.

The third movement, namely, the tendency to extend the principle of the laboratory, is indicated only by actual examples, which we shall later present in full.

Thus this report deals with scattered data under three general heads: (1) The scope of education; (2) The teaching body; (3) Method.

THE BROADER CONCEPTION OF EDUCATION

1. *Physical education.*—With this general survey of the field we pass to a detailed discussion of such facts as our data enable us to present. One phase of our broader view of edu-

cation is an increased emphasis upon the needs and demands of the body. This emphasis is shown in two fairly distinct ways. In the first place, legislative enactments and school regulations constantly recognize the fact that there is a close interrelation between the physical condition of the child and the efficiency of his school work. And in line with this tendency, but reaching out beyond it, is another—the effort, namely, to improve the physical condition of people of all ages irrespective of resulting mental efficiency, although welcoming it, of course, as an incidental result. The establishment of gymnasiums, playgrounds, roof gardens, medical inspection, and school nursing is a further general indication of this double trend toward the cultivation of bodily power.

New York City, finding that, out of 78,000 children, 33 per cent. suffered from defective vision and nearly 60 per cent. needed medical attention of some kind, has attacked the problem vigorously. Massachusetts has required that all school children shall be tested for defective hearing and eyesight (act of March, 1908), while Boston and Cambridge have gone still farther in establishing school nurses. That this latter movement is of inestimable value needs no demonstration, but since it is pioneer work it deserves special attention.

As Boston was the first city to establish medical inspection, in the year 1892, so it has been the first to install a corps of school nurses as regularly examined, certificated, and employed by the school board, as is the teaching force. Nurses supported by private benefaction have served in the most crowded school districts of the city in increasing numbers since the first began her work in the Quincy School in November, 1905; but in September, 1907, a supervising nurse and twenty assistant nurses under the director of physical training became an integral part of the school system. On the opening day of school the nurses, each assigned to a specific district, began their tours of inspection with immediate good results in the discovery of infectious diseases, in the securing of prompt surgical and hospital care where it was needed, and in the relief and help afforded to anxious teachers and ignorant parents. Children

who would shrink and tremble, filled with terror at the words "doctor" or "hospital," gladly submitted to the probe or needle in the hands of the nurses, with the feeling that here was only another teacher trying to make them comfortable.

No adequate report of the first five months' work of these Boston nurses can be given here, but some idea of its scope and value may be gained from the following facts and figures: 1,492 cases of disease of the ear have been treated; 6,078 eye cases and 1,131 cases of defective vision corrected; disease of the nose, 2,602 cases and 423 adenoids removed; diseases of the mouth, 1,765 cases; throat, 1,695; skin, 10,139; every case being cared for and followed to the home, where instruction was given for the care of the patient. In addition to all this, 9,144 dressings were made by the nurses; 3,120 excluded pupils were cared for at their homes; 3,293 were taken to their family physician, 3,202 of these last returning to school cured after a minimum period of absence; 7,559 home visits were made for the purpose of advising or instructing parents concerning their children; 4,772 children were taken to hospitals with the consent of the parents, and many deeds of pure charity were scattered along the way. Each of these cases is carefully diagnosed and recorded so that the removal of a child from one district to another does not interfere with his medical treatment.

Talks on school and home hygiene and common diseases are given to parents and teachers by the supervising nurse, and by the director, and pupils are being trained to give first aid with most interesting results. Clinics and conferences with nurses and medical authorities are frequent, and once a week all the nurses meet the supervising nurse for counsel and encouragement. Each school district has been provided with all necessary appliances for first aid—ointments, antiseptics, bandages and so forth—and twenty schools are fully equipped with cabinets of medicines, surgical appliances, dressing-tables, and screens. Many other lines of work are being planned for; 12 nurses were added to the corps on February 1, making 32 now in the field; and the enthusiastic zeal of the nurses in their pioneer work is beyond praise. Above and beside all results

which can be tabulated are the improved conditions of cleanliness and healthfulness in the schools and in the homes, and the thousands of children who are living happier, freer lives because of the work of the school nurse.

It is to be noted that the children of the poor are not the only ones that need medical inspection at school. Examination of children in private schools has revealed surprising defects of vision and hearing, the presence of adenoids, etc.

The constant activity of the American School Hygienic Association is another indication of the increasing interest in this phase of education. This movement has met with the hearty co-operation of the medical profession. Thus, in many cities, eye and ear specialists have offered to treat without charge any pupil found defective, if the teacher knows that the financial condition of the family is such as to make the cost of the operation an undue burden. The opening of special schools for physically deficient pupils is another indication of this trend. A marked example is the Fresh Air School in Providence. Here the classrooms are practically open to the air all the year round and the work is carried on in full contact with the outside air and sunshine. The Groszmann School for atypical children, in Plainfield, N. J., is another example of this movement. In view of the average condition of the usual school building, and on the principle that prevention is better than cure, it is to be hoped that a modified form of the Providence idea may be applied to school buildings in general.

In athletics, another phase of this development, the tendency has been in the direction of better regulation. Massachusetts has empowered school boards to regulate such matters (act of April 13, 1907). Boston has attempted to correct former evils in athletics by new requirements administered by a committee of head masters under the direction of the superintendent. An interesting experiment in Indianapolis consists essentially in prohibiting all interschool contests and confining the work to various events and games carried on by teams and members from the same school. Clark College permits no intercollegiate games, and the general tendency among New England colleges

is to reduce intercollegiate schedules—witness the vote of the Harvard faculty in agreement with the vote of the Association of New England Colleges. This movement is in the interest of more physical exercise, more general participation in athletics at the expense of teams and team contests.

Thus, in the way of experiment and in the way of legislation, the teacher and the state appear to be recognizing more and more the truth of Herbert Spencer's primary educational requirement—the development of physically sound citizens.

2. *The new functions of the school.*—If this first-indicated trend toward a broader educative concept lies on the side of physical development, a second no less marked trend is in the direction of an extended idea of the function of the school. This has been particularly marked in three directions, commercial education, industrial education, and social training.

Experiments along these lines have led to a much more marked co-operation on the part of citizens than the more narrow culture education could generally obtain. The movement has thus led, on the one hand, to the establishment of special schools, and, on the other, to devices for making the co-operation of citizens of mutual value both to the public and to the school.

The first phase of this movement is illustrated by the development of vocational high schools. Boston, New York, Springfield, and Philadelphia have established these schools, both for boys and for girls. The peculiarity of the vocational school lies in the aim, which is to fit the pupil to earn his living at once upon graduation and to advance thereafter in business or in industry upon as sound a basis as the older schools have supplied for the learned professions.

Thus, the High School of Commerce in Boston differs from the so-called commercial departments in the other high schools, in that it purposes to train students not to be merely stenographers and bookkeepers, but to take an active part in business life—especially in the field of distribution—upon the basis of a training which will fit the pupils eventually to assume large business responsibilities. The awakened public interest in this

movement is well illustrated in the advisory board of business men connected with this school. That this method of bringing active citizens in actual touch with the school must work to advantage to both schools and business men, is so evident that one can only hope that the idea may be extended to other educational institutions.

In industrial as distinguished from commercial work the progress has been marked. While it has long been recognized that a legitimate function of the state is to aid both the intending industrial worker to secure a proper preliminary training and the man already at work to secure additional education along his special line, the extension of means for carrying this notion into effect in broader and better ways has gone on rapidly. New York, Pennsylvania, Rhode Island, and Massachusetts have now state commissions on industrial training, and societies, such as the Society for the Promotion of Industrial Training, are pushing an active propaganda. Congress has established thirty agricultural high schools, and many colleges have added agricultural schools to their departments.

In secondary education but few cities have established such schools as yet, Springfield, Cambridge, Boston, and Waltham being perhaps the most marked examples, while schools dealing chiefly with adults, especially evening schools, are more numerous. A marked feature in this connection is the large proportion of these schools as yet under private management. In Massachusetts, perhaps the best example is the school of the General Electric Co., at Lynn; the Boston Y. M. C. A. and the Massachusetts Trade School for Girls are also examples. The significance of these private schools, as of the correspondence schools, lies in the evidence they furnish that our present public educational institutions fail to meet, in a large part, an existing demand on the part of the citizens of our commonwealth. The Massachusetts commission has, during the last year, promoted greatly this advance in educational work.

Evening schools for industrial workers have been established by the commission in Cambridge, Beverly, New Bedford, Waltham, and Taunton, and requests for a number of others

are under consideration. Northampton is to establish the first industrial day school under the commission. Upward of a thousand people are attending schools already under the direction of the commission.

All of these schools are alike in that their object is entirely or mainly vocational. In the evening schools, particularly, only such work is done as will add to the industrial efficiency of the worker. No attempt is made to teach anything more than the trade in which the student is already employed. The trade taught is almost always closely allied to the most prominent local industry. In the day schools a broader training is attempted, although even here breadth of training is sacrificed to vocational needs. These schools usually utilize the equipment of the day school for trade instruction in the evening. Briefly stated the object of these schools is as follows:

1. To increase knowledge of the theory and the processes of trades in which men are already at work.

2. To fit for industrial pursuits young men who can attend a secondary school but who do not intend to go to college. In this way the years from 14 to 17, which are almost entirely unproductive industrially, may be utilized for valuable education purposes. This is a service previously rendered in a crude way by the apprentice system.

3. To furnish for our industries the trained workers for which they have been seeking during the past decade.

The commission has considered carefully the need of agricultural schools in the state, and reports a number of districts which have been studied with a view to establishing such schools. The commission has also prepared a plan for an industrial school for girls. The advisability of establishing an industrial college has been considered and reported on. The reports of the commission are documents of great significance, which every teacher will do well to read. Other states and even the national government will undoubtedly follow the example set by Massachusetts in this important undertaking, in which the next five years will certainly witness marvelous advance.

3. *New uses for school equipment.*—The preceding para-

graphs have indicated in some degree the character of the evidence which leads us to state that the concept of the function of education has steadily widened during the last year. Closely allied to this tendency is the tendency to a wider use of the machinery of the public educational plants for the general benefit of all citizens. This is indicated most markedly by the development of the public lecture courses.

While such lectures are now given in many cities, the New York work is most fully developed. Last year, at 166 lecture centers, 116 courses on 715 subjects were given to 1,603 audiences with total attendance of one and a half million. About 70 per cent. of these were given in school buildings. All were free and given under the control of the Board of Education.

Curiously enough the two lines in which the concept of the function of education seems to be broadening, represent, on the one hand, a return to the old Greek ideals; on the other, a tendency to develop the scope of the educative process to meet the requirements of a civilization based on production, manufacture, and distribution.

4. *A new educational process.*—In a third direction there has developed recently not so much an extension of the function of education as we now understand it, as an educative process based upon a somewhat different view as to what education should do for the pupil.

From the usual point of view education is individualistic. All methods or devices are based on the theory that the student stands on one side and the educating agent on the other, the result being that of the simple interaction of the two.

In comparison, the theory now under discussion starts with the proposition that our modern civilization is carried on essentially by co-operative methods; therefore, since the student should be educated to take part in that civilization, he should be trained in such work. While this theory of social education, as it may be called, is not new, since it lay at the bottom of Professor Dewey's Model School at Chicago before 1900, some recent experiments have come to our attention which are worth noting.

In general, under this plan, pupils are encouraged to combine in groups for the accomplishment of some desired end which may well be the accomplishment of some school work, and so take advantage of what may be called "team spirit." In this way, it is claimed, pupils not only learn from each other but they are trained in co-operative methods: the method of the society in which they must live their lives. Work along these lines in high schools in Charlestown, Detroit, Medford, New York, and New Bedford, as well as in the Pierce School in Brookline, and the Boston Normal School, would seem to indicate that, in a considerable range of studies with a teacher in sympathy with the work, a good deal of training in social organization can be given, accompanied by a saving of about 20 per cent. in the time required to cover a year's work, thus illustrating the statement that "the force of no one teacher is equal to the dynamic force of the class before him." As a concrete example of this sort of work we give briefly some notes on the work in New Bedford, as applied to regular school work, with children of thirteen to fourteen years of age.

a) Four leaders are nominated by the class. These choose in turn the numbers of their group. The same question is given to each group and they agree upon the answer, which is handed in in writing. The returns are left on the board, and the group answering the most questions and with highest marks wins the race.

b) Groups are chosen as above. Each group takes a different topic and prepares each member to recite on it. When they return for recitation the teacher is at liberty to call on the poorest member to recite on it, and the whole group takes the mark given. This device works excellently for arousing class interest in the poorer pupils.

c) Elective work. In addition to required work, the members of a class are allowed to elect some special topic. Some selected musical instruments, and found directions for experiments on sound. Another brought her camera, and from that has worked into a study of lenses and reflection. Two have prepared illustrated lectures on the history of the steam engine.

Two are working on horse power. A marked gain in order and interest has resulted.

These methods, according to the report on this work, have greatly stimulated interest, organization, and results.

In work of somewhat different type as reported by Miss Nelson, in Brookline, the children were given half an hour a week to do anything profitable to themselves and of service to the class in groups made up among themselves with leaders chosen by themselves. This resulted in too great a variety of work to recount in detail, but, in most cases, something was produced, something of value to the children, and by a process involving self-activity of the most pronounced type.

To anyone interested, an examination of a description of the school at Abbottsholme, England, where this theory is logically carried out in all details, would be of interest.

This idea of organization to attain a desired result has worked out somewhat differently in some cases of what might erroneously be called student government. A good illustration is in the Belmont High School, where, by an elected committee the pupils are able to manage the affairs of a study-room in which there is no teacher. There was a vacant room, but no teacher to take charge. The pupils wanted a quiet study-place. They undertook to manage the matter and have done so. A pupil whose conduct is objectionable is first warned and then expelled. If expelled, he is merely given a seat in a room in charge of a teacher. The theory is simple. "If you can take care of yourself, all right; if not, the school will take care of you." Without knowing it, these pupils have organized the matter on the lines of a private club. As this arrangement has gone on for several years, it seems to be a success, indicating, as many other student activities do, how much even young people can accomplish in managing their own affairs if allowed to go at things in their own way.

Such cases as these just cited indicate a general movement in the direction of allowing pupils to get at results in their own way: a tendency to get away from the idea of the teacher as an exerciser of arbitrary authority, to make the pupils active rather

than passive. It has no relation, however, to the regular schemes of student government where authority is delegated, or is pretended to be delegated to pupils. Such movements as those shown in the School City, and other well-known experiments of that nature, while perhaps useful, are organized on a different basis and with a different aim.

THE INCREASED DEMANDS ON THE PROFESSION

While, on the one hand, the concept of the educative process has grown broader during the year, on the other hand there are some indications that the teacher is being recognized as a more potent factor in the school system and that his work is being more appreciated by the community. The recognition of the importance of the teacher is shown mainly in an increased tendency on the part of the executive to consult with the teacher, to perceive that the person who actually does the work may give valuable assistance in planning it, and in increased demands for adequate preparation and equipment in the members of the teaching body. The increased appreciation of the function of the teacher's work by the community is shown by the continued efforts to make the work more attractive by means of some pension system.

1. *Consultation of teachers by school officers.*—The value which is being placed by executives on the advice of teachers is well illustrated by the new organization of the school system of Boston, where it has become a common practice for representatives of the teaching body to be called into direct consultation with the superintendents of the School Board.

Several committees of teachers have co-operated in the revision of courses of study; another committee has worked over the problem of the large percentage of failures in the first year of high schools; still another is investigating opportunities for academic and professional study for teachers in service.

A list of approved books has been made by a joint committee of teachers and executives, and other teachers' committees have been charged by the board with the study of certain problems relating to administration.

That this movement is not strictly local is shown by the fact that in another New England city teachers are now called upon by sub-committees of the School Board for consultation, and it is proposed to hold joint meetings of the high-school committee with the entire high-school faculty.

The tendency of all these things is, plainly, to increase the importance and to improve the professional standing of the teachers.

2. *Requirements for professional training.*—On the side of increased professional requirements Boston again offers a typical example. Under the present system admission to the eligible list is only secured on evidence of successful experience of from two to five years, and subsequent promotion depends on evidence of continued professional work as shown in the ability to pass promotional examinations at the end of the second and sixth years of service.

While Boston gives, perhaps, the most recent illustration of the tendency, in the form of a definite scheme, a general drift in this direction is marked. In general, no one is now eligible as a teacher in our larger high schools unless he holds a college degree, and the multitudes of teachers already in service who are continuing academic and professional study in the universities shows that they are alive to these increasing demands, and are endeavoring to meet them.

3. *Salaries and pensions.*—That some response on the part of the community is evident is shown in the gradual increase in the average salary paid to teachers, and in the pension legislation in various states. Salaries have been increased from \$606 to \$638, in 8 years, in cities of 8,000 or over. In Maryland, Ohio, New Jersey, and Rhode Island teachers are now pensioned from the public funds. In most places a fund is established by joint contributions from the community and the teachers. The Indiana bill will serve as a good example of this second method. Its provisions are, in brief, as follows: In each city of ten thousand or over a pension fund is established which is derived from two sources: (1) an assessment on the teacher of a certain percentage of his salary, and (2) a special tax of one

cent on each hundred dollars of valuation. The maximum pension to be paid is \$600 on thirty years' service or on retirement for disability after a shorter period. Five years of service outside of the city or town paying the pension may be included in the time required to obtain a pension. An interesting provision of this bill allows leave of absence for study to be counted in the term of service.

In Massachusetts, besides special bills now before the legislature affecting the pensioning of Boston teachers, a general bill (House 799) authorizes cities and towns to establish pension funds for teachers in the public schools without the assessment of the teachers, and provides that on petition of 25 voters such action shall be submitted to popular vote.

Such legislation as this will certainly tend to hold in the profession those whose ability has a value greater than the communities can afford to pay for and also to hold them in the community. In this connection it may be interesting to know that 10 per cent. of teachers in cities serve only three years, while a little over 1 per cent. have served twenty years.

We have now dealt with two of the three main divisions of our report—the broader concept of the function of education, and the higher status of the teacher. The third division remains to be treated. The tendency which is here to be noted is to extend the principle of laboratory work, both in its natural field of science and in the field of other subjects.

EXTENSION OF THE LABORATORY PRINCIPLE

As examples of the extension of the laboratory principle in the study of science, we present a report of work in physiography at Harvard and a report on school gardens. As examples of the laboratory principle applied to non-scientific subjects we present reports on new forms of work in civics and in modern languages.

1. *Supervised exercises in a college course.*—The work in physical geography at Harvard, as formerly conducted, was carried on in the usual manner by lectures and a usually more or less unsystematic study of a textbook, as the student's contri-

bution. At present, each student is required to spend two two-hour periods a week in the laboratory, at specified times, in addition to his lectures and textbook study.

Under these conditions, the accomplishment of designated exercises by all competent members of the class is actually secured. The work is done under the inspection of an instructor or assistant; it is left in the laboratory for examination. No habit of copying can be formed—an important ethical point—and at suitable intervals tests are given.

As contrasted with the conditions when three hours of lectures were theoretically to be supplemented by six hours of study (making the supposed standard of nine hours a week), these six hours to be done as the student should determine, the difference is stated to be enormous. Four of these six hours are now actually spent in assiduous work. There can be no question that the student profits more from this regular, systematic, supervised work, than from the irregular, random, neglected work in his room.

An essential point in this work is that instructions are provided for the student to follow in the exercises. In an elementary course, he is not an investigator, making out his own method; he is at the best a follower, faithfully doing what he is told to do. This does not mean that in the specified exercises, the student has no occasion to use his mind ingeniously; but he is promptly guided to the very place where such use must be made of it, instead of being allowed to wander about and try to find the place. It may be added that results of entrance examinations at Harvard would seem to indicate that secondary schools are today in great need of the development of similar practice exercises in physical geography (physiography), exercises of useful and disciplinary character; that textbook study supplemented by existing school exercises is insufficient. School teachers are, undoubtedly, ready and anxious to introduce such exercises; but they have not yet succeeded in originating them.

Another improvement, lately introduced into the elementary course in physiography (Geol. A), is the addition of a brief period, in which each student meets the instructor, alone, once

a fortnight, for the purpose of stating his difficulties and receiving help in overcoming them. If the difficulties are of a kind that the student ought to overcome himself, no help is given him; but if they are real difficulties they are carefully explained, much to the profit of the student. This, it should be noted, is entirely different from the quiz work common in many courses. A quiz nearly always has for its object the discovery of what the student does not know, so as to mark him down; sometimes it may have for an object the discovery of what he does know, so as to mark him up; but the impression gained by the students is that the first object prevails. As a result, the quizzes are fencing lessons; no helpful, confidential relation is established. The individual meetings, referred to above, are not used at all as a basis for marking; the student is so informed. He is told further that the object of these meetings is to help every man forward to getting an "A" for the course. As many college courses are now conducted, there is often not enough of helpful, individual teaching; not enough opportunity for the student frankly to disclose his ignorance to the teacher, without suffering the penalty of being marked down. Here the object is just the reverse; the ignorance disclosed is repaired by the instructor, with the hope that in the next quiz an excellent record may be gained. The plan is stated to work admirably. The students appreciate it, and speak out frankly. It may be wise to note that this plan requires an expert teacher, competent to detect sham ignorance, resulting from laziness or indifference; and to recognize real difficulties, of which there must of course always be more or less, for teaching is seldom perfect.

2. *New laboratory work in high-school science.*—Another example may be cited in a course in elementary science in a New England high school. Here the laboratory work in the school is supplemented by many visits to such places as the repair barn of the street railway, the power station, the cold-storage plant, rope works, and lighting plant. Aside from the direct advantages to the pupil this work has led to expressions of approval on the part of parents whose attention was drawn to it by increased interest on the part of their children. It has

also led to a strengthening of connection between the school and the community. Not only are the classes always received with courtesy, but, in some cases, foreman and superintendents have sent word that "something interesting was on" and to come and see it.

3. *Practical work in languages.*—While such methods of concrete work have long been used in science, the above cases illustrate the further drift in this direction in such work. As indicating a similar drift in other lines we may mention the so-called "reform" method of teaching modern languages as carried on in the Horce Mann School, where it has been in use for three years, as carried on in the schools of Prussia, and, to some extent, of France.

Under this method, pupils after two years of German, four periods (40 minute) a week, obtain a good working knowledge of German. The upper half of the class pass the intermediate examinations of the college entrance board without fail, and find themselves in the upper part of the college courses in German. The same method in French is being introduced this year.

4. *Laboratory exercises in civics.*—As a sample a preliminary visit to the Superior Court room and grand-jury room made in connection with a visit to the county buildings may be described.

A preliminary study of the county government had been conducted and, in connection with the fact that the county in New England is the unit for the administration of justice, a brief outline had been given of the relation of the local (district) court, the grand jury, the superior court, the jail, and the house of correction.

The class were taken to the grand-jury room, asked to note its small size, grand-jury sittings not public; to count the chairs—number of grand jurors, twenty-three. An accused is chosen to take his place on the witness stand and an impromptu sheriff to have custody of him. After a brief statement of the source of the indictment, of the facts that only witnesses against the accused are heard here, and that a majority vote of the jury is necessary to the finding of "a true bill," the class follow the

sheriff and his prisoner to the Superior Court room. The teacher assigns one student to the judge's chair, another to the clerk's desk, assigns to their respective places a crier, a reporter, two or three witnesses, some lawyers, and impanels a jury of twelve for the jury box. The rest of the class occupy the public seats. After the teacher has given a brief outline of the trial of a case, calling attention to the duties of the various officers in the courtroom, the judge sentences the prisoner—with all others in the room—to sixty minutes in the house of correction. The sheriff takes us there, and we are duly committed—unless, as sometimes happens, a bona-fide sheriff brings a bona-fide prisoner at this opportune moment. Behind the doubly locked doors the keeper shows us the cells of the prisoners, who are at this time at work in the shops, and explains the provisions—made under the direction of the county commissioner—for the care of the inmates. We are shown the jail which the keeper explains is occupied by those, presumably innocent, between their experience in the police court and that of the grand-jury room or between the latter and the forthcoming trial in the Superior Court.

After an inspection of the convicts at work in the shops, the laundry, the baths, the kitchen, after seeing the convicts locked in their cells, and after hearing a brief statement of the relation of the officers of the institution to the county commissioners and to the sheriff, the pupils are told that their sentence has expired, and they are dismissed.

It must be borne in mind that this is only a *preliminary* visit preparatory to a more careful and detailed study of the state judiciary and to a later visit to the District and Superior Courts in session. This is practically introducing the laboratory methods into this study, somewhat in the manner of the case system in the law school of Harvard.

A further experiment reported is in the line of—

5. *School gardens*.—Such gardens are established in primary schools in Cambridge, one in process of evolution in Bridgewater, and have been developed elsewhere. While the idea is not new, the development in this country has not been so

rapid that a brief report may not be of value. The Bridgewater garden is stated to be organized with the following aims: (1) Individual plots to be cultivated by students in ways directly related to their future work as teachers; (2) Collections of useful plants to be grouped in botanical relation, and ornamental plots worked out for effective color schemes.

The school garden at Bridgewater is *in posse* rather than *in esse*. The plot of land presented to the state last year by the principal has been fenced in and paths have been laid out. Next spring it is to be cultivated in accordance with plans already made.

These plans include: first, the school garden proper, which is to be divided into individual plots, these to be cultivated by the normal students in ways having a direct relation to their future work as teachers; second, a collection of useful plants of all types, for use chiefly in the department of geography and in the Model School; third, beds of plants so grouped as to show relationships within the botanical families, the purpose being to make the student so familiar with family characteristics that he will recognize them instinctively; fourth, beds of flowers and ornamental plants so chosen and so grouped as to illustrate effective color schemes. It is probable, also, that one corner of the field will be set apart for a wild garden.

In one part of the field will be a pond with a brook for outlet. This will serve not only as a home for pond and brook life, but also for drainage. This opportunity for drainage, together with the natural difference in soil in the several parts of the garden, will illustrate some of the diversities which a continent exhibits upon a larger scale, diversities not only in surface and soil, but also in the resulting products and their influence upon occupation. It may also be possible to illustrate what one writer calls "plant societies" and "zonal distribution."

In direct connection with the plants are of course the insects, both friendly and hostile, and these will also be objects of study.

From what has been said, it is easy to see the garden aims to be not so much a means of teaching agriculture for utilitarian purposes as an outdoor laboratory for the study of nature,

mineral, plant, and animal, giving opportunities for correlation not only among the several departments of the normal school, but between the normal and model schools, and giving to all who are connected with it a broader view of "the earth as home of man."

In addition to the foregoing, some mention should be made of—

ATTENTION TO INDIVIDUAL NEEDS

The general trend of recent years toward greater flexibility in the matter of promotions, and of increased attention to individual needs, continues. Most of the following expedients are not new, but may be noted as showing the line along which effort is being made at present.

The so-called Batavia system of individual instruction has recently been formally introduced in Haverhill and Everett, Mass., and Westerly, R. I. It aims to assist the backward children, and bring them up to grade. Two teachers are provided for large classes, one of whom devotes her entire time to class teaching, the other her entire time to individual instruction, it being a cardinal feature of the system to treat pupils singly, and not in groups. With classes too small for two teachers the single teacher gives half time to class instruction, and half to individual, sometimes dividing the time of the daily recitation, and sometimes alternating the two exercises on successive days.

This system completely ignores the unusually able pupil, and holds that he will take care of himself, a more than doubtful position. Its idea of grading all up to a common level is manifestly impossible and undesirable, for it is a part of the school's duty to discover and develop unusual talent, and this is quite as important as the rescue of incompetents.

Medford reports three experiments in irregular promotions, designed to assist the brighter pupils.

One plan is to arrange the programmes of a building so that a subject like grammar or arithmetic will come for all the grades at the same hour, pupils being allowed to advance in each subject as fast as capable. Under this plan a pupil may be

in the sixth grade in arithmetic, the eighth in grammar, and the seventh in history.

Another is similar to the Cambridge plan, with the programme of studies arranged in two parallel lines, one being arranged for two years less time than the other. Pupils that enter the fourth grade are divided at the end of three months, those who are capable of doing work more rapidly being made into a section that will move on with greater speed than the other. Pupils will drop out of this section, and others will be received along the route.

Still another plan is that of dividing each room into a maximum and minimum section, and having the maximum cover more than the work of a single grade. The disadvantage is that the minimum section is likely to be discouraged, and pupils once in this section are likely to remain throughout their course.

Newton has introduced the "floating teacher" in each school. The plan contemplates, in part, carrying forward a division of a class faster than the class as a whole can go, in part, allowing any individual to go ahead as fast as he can. It involves a complete change of attitude toward the work on the part of teacher and pupil.

Increasing attention has been paid to individual needs in the Methuen schools for some years past. An assistant teacher, without regular class, is maintained in each of the larger school buildings, whose most important work is to assist backward children, as well as those who are able to make unusual progress. The result has been to diminish the number of those who fail to secure the annual promotion some 33 per cent. in two years.

A method in common use of adjusting required work to individual needs is that of maximum and minimum requirements in the various studies. A certain amount is required of all, such as can be done by those rather slow, and additional work is assigned to others according to their ability. The plan has this advantage, that it does not involve the advancement of precocious children into classes of older children, but encourages their normal development, and allows them to get the full value of all experience in each successive year.

Another plan for reaching individual needs is that of the ungraded room, to which are sent those who are in any way abnormal to such an extent that they are not able to profit by the ordinary class instruction.

An interesting experiment is reported from the Washington School, Washington, D. C., a private secondary school which has for eight years made use of a purely elective system. There is no fixed programme of studies, but the curriculum of each boy is arranged to suit his peculiar needs. There are some forty courses available, each course representing a year's study in one subject. The principal of the school, having in mind the boy's abilities, and the college-entrance examinations for which he must prepare, lays out a curriculum, sometimes for one year, sometimes for the entire school course. The principal declares that after working with this system for eight years he hardly sees how he could get along with fixed courses.

CONCLUSION

The material on which this report is based has been derived from reports made in response to our circular, as well as from information obtained directly by members of the committee. In addition, some material is obtained from public documents or articles in recent publications. While the contributors were too numerous to name in detail, we wish to express our thanks to all who have aided us in our year's work, and so enabled us to lay this report before you today.

There has recently appeared a description of a modern battle in which the observer says that the most remarkable thing about it to him was the apparent absence of anybody in a country over which one army was known to be retreating and the other advancing. The gray-uniformed men were invisible: smokeless powder did not betray the location of the fighting line, only here and there a solitary figure, or the winking of a heliograph indicated that a movement was in progress.

So, with us, the teacher fights under cover, away from public view, with smokeless powder. Only here and there can we catch a glimpse of movement, but your committee believe that

just as the few solitary figures or the heliograph may mark to the observer the location of the advancing army, so the reports which it has brought before you today mean that in college and in school, teachers and executive officials are striving to make the work of our profession broader, more efficient and more useful in aiding to make better scholars, better citizens, better men.